

REMARKS

This application has been reviewed in light of the Office Action mailed on August 23, 2004. Claims 1-16 are pending in the application. Claims 1, 8 and 15 are in independent form. By the present amendment, Claims 1, 8, 10, 13 and 15 have been amended and Claims 3-4 and 6 have been cancelled without prejudice. No new matter or issues are believed to be introduced by the amendments.

(1) In the Office Action, the Specification is objected to for failing to provide proper antecedent basis for the claimed subject matter. In response, Claims 3-4 and 6 have been cancelled. Withdrawal of the objection is respectfully requested.

(2) In the Office Action, the drawings are objected to because figure 1 fails to include a legend such as "Prior Art". In Figure 1, the previously omitted descriptive legend "Prior Art" has been added. Withdrawal of the objection is respectfully requested.

(3) In the Office Action, Claims 3 and 6 were rejected under 35 U.S.C. §112, first paragraph. In response, Claims 3-4 and 6 have been cancelled. Accordingly, withdrawal of the rejection is respectfully requested.

(4) In the Office Action, Claims 11, 20 and 22 were rejected under 35 U.S.C. §112, second paragraph. In response, Claims 3-4 and 6 have been cancelled. Accordingly, withdrawal of the rejection is respectfully requested.

(5) In the Office Action, Claims 1-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,647,361 issued to Laird et al. in view of U.S. Patent No. 6,069,653 issued to Hudson. Applicant respectfully traverses the rejection.

In the Office Action, Laird is cited at Col. 8, lns. 27-50 for disclosing the step of *multiplexing said video data such that video of multiple scenes are distributed in a single video stream*. Laird is also cited at Col. 8, lines 50-54 for disclosing *at least part of each of said video data being apportioned to a respective part of a moving image defined by a resulting multiplexed moving image*. Applicants respectfully disagree with the Examiner's assertion.

Laird et al. teaches a system and method for detecting and filtering non-violation events in a traffic light violation prediction and recording system. The system provides a software thread which operates in response to at least one violation prediction image derived from the output of an image capturing device, and a current light phase of a traffic signal. The violation prediction image may be one of multiple digitized video images showing a vehicle approaching an intersection controlled by a traffic signal. Target vehicle identification and position information is passed from a tracker to a prediction unit which determines whether any target vehicles are predicted violators. The prediction unit may generate a message(s) for a violation unit indicating a vehicle identity in addition to a violation prediction score. In response, the violation unit receives the data and schedules resources used to record one or more relatively high probability violation events.

The violation unit operates using a number of software agents that control a set of resources which include one or more violation cameras which pass video streams to a digitizer in order to obtain digitized video frames for storage within one or more recorder files. Laird discloses at Col. 8, lines 50-54 that the composite recorder files may be formed in the memory 92 using selected digitized portions of four video streams. As the four video streams pass through

respective controller cards, a software module controls which video streams are passed between the controller cards as well as which frames are stored in which controller files (see Laird at Col. 8, lns. 27-54).

It is submitted that in accordance with the method of Laird, the composite recorder files of Laird are generated under control of a software decision process that makes a selective determination regarding (1) which video streams are passed between the controller cards, as well as (2) which video frames are stored in which recorder files within the memory.

It is submitted that such a selective determination falls outside the scope of spatial multiplexing, as recited in the independent claims. Accordingly, there are patentable differences between the methodology described by Laird et al. and the recitations of Applicants' independent Claims 1 and 8. The disclosure of Laird et al. does not disclose or suggest a method or system for spatially multiplexing said video data such that all of the video frames which make up the multiple scenes are spatially distributed in a single composite video stream, as recited in the independent claims.

It is well known that spatial multiplexing is a grouping technique which takes a number of constituent source streams for example and generates a single composite stream in a pre-determined and predictable order. In so doing, every video frame which make up the constituent separate source streams are included in the composite stream.

For example, in the case of four exemplary video sequences, assume each sequence is comprised of a plurality of frames, where a first video sequence is made up of frames A1, A2, A3, A4,....., a second video sequence is made up of frames B1, B2, B3,...., a third video sequence is made up of frames C1, C2, C3, ..., and a fourth video sequence is made up of frames D1, D2, D3,.... The four source sequences can be spatially multiplexed into a single composite sequence as follows:

A1, B1, C1, D1, A2, B2, C2, D2, A3, B3, C3, D3

It is noted that the composite stream exhibits a pre-determined and predictable order. Further, each and every video frame from the four constituent video streams is incorporated into the composite video sequence. That is, there is no software decision process making a selective determination regarding which frames to allow and which frames to discard, as taught by the reference.

Hence, Applicant's amended Claim 1 recites limitations that are believed to be patentably distinct from the method disclosed by Laird. Claim 1 recites in part:

1. A method of analyzing content in video data, comprising the acts of:

spatially multiplexing said video data such that each frame of video of multiple scenes is spatially distributed in a single composite video stream, at least part of each of said video data being apportioned to a respective part of a moving image defined by a resulting multiplexed moving image; and

Laird et al. does not disclose or suggest the above-underlined limitations which have been added to Claim 1. Similar recitations have been added to Claim 8 and the same arguments presented below with respect to Claim 1 apply to Claim 8 as well.

Further as to Claim 1, in the Office Action, Hudson is cited for curing a deficiency in Laird et al. Specifically, Hudson is cited for disclosing the act of *analyzing content of said multiplexed video image such that data in others of said each of said video data is ignored to reduce an analysis particular to one of said multiple scenes*. The Examiner cites Figs. 4c-4d of Hudson wherein only three images are to be displayed and a fourth one will be black since there is no activity going on.

Hudson discloses a security control system arranged to receive video signals from a plurality of video sources, and to selectively output a subset of the received video signals for

display on a display means. Hudson discloses that a system controller is arranged upon receipt of alarm signals to output to a display controller those video signals being generated by video sources associated with the alarm signals. The display controller is then arranged to cause any images generated from such video signals to be displayed in a predetermined area of the display means. (see Hudson at Col. 2, lns. 20-45).

Claim 1 has been amended to better define Applicant's invention and to overcome the above-noted rejection. In particular, Claim 1 has been amended to recite in part:

1. A method of analyzing content in video data, comprising the acts of:

spatially multiplexing resulting multiplexed moving image; and
.....; and

performing computerized operations on the content of said multiplexed video image such that data in others of said each of said video data is ignored to produce an analysis particular to one of said multiple scenes. [Emphasis Added]

Claim 1 has been amended to clarify the more precisely define what is meant by "analyzing the contents of said multiplexed video image". For example, content analysis may include performing motion detection on the multiplexed data.

Hudson does not disclose or suggest the above-underlined limitation which has been added to Claim 1. Similar recitations have been added to Claim 8 and the same arguments presented below with respect to Claim 1 apply to Claim 8 as well.

Claim 1 has been amended to clarify the more precisely define what is meant by "analyzing the contents of said multiplexed video image". For example,

Accordingly, it is believed that Applicant's Claims 1 and 8 recite patentable subject matter, and therefore, withdrawal of the rejection with respect to Claims 1 and 8 and allowance of Claims 1 and 8 are respectfully requested.

Claims 2 - 7 and 9 - 14 depend from Claims 1 and 8, respectively, and therefore include the limitations of Claims 1 and 8. Accordingly, for the same reasons given above for Claims 1 and 8, Claims 2-7 and 9 - 14 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejection with respect to Claims 2 - 7 and 9 - 14 and allowance of Claims 2 - 7 and 9 - 14 are respectfully requested.

(6) In the Office Action, Claims 15 and 16 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,069,653 issued to Hudson. Applicant respectively traverses the rejection.

In the Office Action, the Examiner alleges that Hudson discloses all of the essential elements of Claim 15 including *said controller being further programmed to analyze content of said spatially distinct portions such that data from one does not interfere with the analysis of another* (see Hudson at Fig. 4c-4d wherein only three images are to be displayed and a fourth one will be black since there is no activity going on).

Claim 15 as amended recites similar subject matter as Claims 1 and 8, and is believed to be in condition for allowance for at least the same reasons given for Claims 1 and 8.

In particular, Claim 15 has been amended to recite as follows:

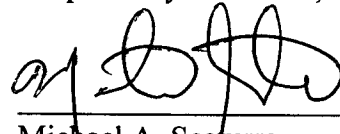
15. A device for analyzing video content on multiple channels, comprising:
an input adapted to receive spatially multiplexed video data;
a controller programmed to select spatially distinct portions of said multiplexed video data received from said input, each of said spatially distinct portions respective of a particular video data channel; said controller being further programmed to perform computerized operations on said spatially distinct portions such that data from one spatially distinct portion does not interfere with the analysis of another spatially distinct portion.

For at least the reasons cited above, Hudson does not disclose or suggest the above-underlined limitations which have been added to Claim 15.

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application and not withdrawn, namely, Claims 1- 2, 5 and 7-16, are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Dicran Halajian, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-333-9607.

Respectfully submitted,



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